

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A method for inert gas welding or inert gas soldering of workpieces (A) made of steel, aluminum, magnesium, copper or alloys thereof with workpieces (B) made of steel, aluminum, magnesium, copper or alloys thereof, using an additional molten metal alloy, wherein said workpieces (A) and (B) ~~may~~ consist of identical or different metals or metal alloys, said method comprising characterized by the following steps:

- a) abutting or overlapping contacting of the workpieces to be joined;
  - b) melting the additional metal alloy containing a Zn base alloy;
  - c) applying the molten additional metal alloy on the contact surfaces or partial areas of the contact surfaces of the contacted workpieces;
  - d) cooling the joined workpieces;
- steps b) and c) being carried out one immediately after the other, with at least steps b) and c) being carried out using an inert gas.

2. **(Currently amended)** The method according to claim 1, ~~characterized in that~~ wherein the workpieces of steel consist of galvanized or non-galvanized steel.

3. **(Currently amended)** The method according to Claim one or more of claims 1 or 2, ~~characterized in that~~ wherein said melting of the additional metal alloy is effected in an electric arc or by means of a plasma process or by means of laser.

4. **(Currently amended)** The method according to Claim one or more of claims 1 to 3, ~~characterized in that~~ wherein the workpieces are joined with or without the use of a fluxing agent.

5. **(Currently amended)** The method according to Claim one or more of claims 1 to 5, ~~characterized in that~~ wherein the Zn base alloy includes from 1 to 25 wt.-% Al.

6. **(Currently amended)** The method according to claim 5, ~~characterized in that~~ wherein the Zn/Al alloy ~~may~~ include one or more of the following alloying additives as single components or in combination: up to 500 ppm Mg, up to 500 ppm Cr, up to 2000 ppm Mn, up to 300 ppm Li, up to 4% Cu, up to 50 ppm B, up to 500 ppm Ti, and up to 1000 ppm Si.

7. **(Currently amended)** The method according to Claim one or more of claims 1 to 6, ~~characterized in that~~ wherein the workpieces are joined using additional metal alloys, the melting temperatures of which ranging from 370 to 600°C.

Int. Appl. No. : PCT/EP2004/050284  
Int. Filing Date : March 10, 2004

8. (Currently amended) The method according to Claim one or more of claims 1 to 7, characterized in that wherein the additional metal alloy is employed in the form of a solid wire or cored wire.

9. (Currently amended) ~~A wire having a diameter of from 0.8 to 3.2 mm for use in a~~ The method of Claim 1, wherein said ~~for inert gas welding or inert gas soldering of workpieces A made of steel, aluminum, magnesium, copper or alloys thereof with workpieces B made of steel, aluminum, magnesium, copper or alloys thereof, wherein said workpieces A and B may consist of identical or different metals or metal alloys, using a molten additional metal alloy consisting~~ consists of a zinc base alloy including an Al content of from 1 to 25 wt.-%, said additional metal alloy is in the form of a wire having a diameter of from 0.8 to 3.2 mm.

10. (Currently amended) The wire method according to claim 9, ~~characterized in that wherein~~ the Zn/Al alloy ~~may include~~ includes one or more of the following alloying additives as single components or in combination: up to 500 ppm Mg, up to 500 ppm Cr, up to 2000 ppm Mn, up to 300 ppm Li, up to 4% Cu, up to 50 ppm B, up to 500 ppm Ti, and up to 1000 ppm Si.

11. (Currently amended) The wire method according to claim 9 ~~or 10, characterized in that wherein it said wire~~ is a solid wire or a cored wire.